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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,764	09/14/2000	Charles Schinner	10001934-1	1332

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EXAMINER

JERABEK, KELLY L

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,764

Applicant(s)

SCHINNER ET AL.

Examiner

Kelly L. Jerabek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over
Hata US 6,603,508.**

Re claim 1, Hata discloses in figure 1 a digital camera including an image capture device (103) for converting light to an electrical signal (col. 3, lines 40-47). The camera includes an automatic exposure control operation for each mode that the camera operates in (col. 5, lines 65-67; col. 6, lines 1-5). Each mode has an exposure

value diagram having a range of exposure times (figs. 4,5,6). The camera disclosed by Hata is capable of operating in a monitoring mode (live view mode) in which an image to be photographed is displayed in a display panel (122) (col. 6, lines 44-47). The camera includes a programmable amplifier (105) for adjusting the strength of the electrical signal in order to output an optimum image signal (col. 6, lines 45-67). The programmable amplifier (105) applies different gains to the image signal depending on the light conditions of the image to be photographed (col. 6, lines 59-67). Therefore, the programmable amplifier (105) is adjusted when it is determined that the image is obfuscated due to lighting conditions to lack discernible features in order to display an image with optimum brightness (col. 6, lines 62-67). These actions are performed in order to produce a live view image with optimum brightness under low lighting conditions (col. 6, lines 59-67). When an image to be taken is dark (low lighting) and the exposure value is less than 9, the gain of the variable amplifier is varied according to an exposure value (Ev) in order to display an image with optimum brightness and free of blur (col. 6, lines 62-67). Although the monitoring mode described by Hata includes all of the limitations discussed above, the embodiment including the monitoring mode does not specifically state that the programmable amplifier (105) is responsive to a manual indication from a user that the image is sufficiently obfuscated due to lighting conditions to lack discernible features.

Hata discloses in another embodiment of the digital camera a blur avoiding photographing mode. In the blur avoiding photographing mode a user can select an appropriate gain level of the programmable amplifier (105) according to the quality level

of the photograph desired by the user (col. 10, lines 41-46). Therefore, it would have been obvious for one skilled in the art to have been motivated to include idea of allowing a user to select the gain of the variable amplifier as disclosed by the blur avoiding photographing mode of the digital camera disclosed by Hata in the monitoring mode of the digital camera disclosed by Hata. Doing so would provide a means for allowing a user of the camera to select the gain of the variable amplifier according to the quality level desired by the user rather than automatically adjusting the gain of the variable amplifier (Hata: col. 10, lines 41-46).

Re claim 2, the gain level of the variable amplifier (105) can be manually selected when the camera is in the blur avoiding photographing mode (col. 10, lines 41-43). The user can adjust the gain level of the amplifier (105) according to the desired quality of the image (col. 10, lines 43-52). Therefore, since the gain level is varied in order to avoid blur the user can vary the gain in order to display an unsmeared image.

Re claim 3, the digital camera disclosed by Hata includes an image pre-processor (107) for further increasing the strength of the electrical signal (col. 5, lines 1-13). The camera is capable of displaying an image in the display panel (122) in a "live view" (monitoring) mode (col. 6, lines 44-47).

Re claim 4, the digital camera includes an analog to digital converter (106), and a digital gain control module (1075) that serves as a digital multiplier for increasing the strength of the digital signal (col. 5, lines 1-6).

Re claim 5, the digital gain control module (1075) adjusts the digital signal level of the R, G, and B data, therefore the digital multiplier means is a digital multiplier (col. 5, lines 4-6),

Re claim 6, CPU (121) is a microprocessor that sets the gain applied to the digital gain control module (1075), therefore the digital multiplier means is also a microprocessor (col. 5, lines 4-6).

Re claim 7, see claim 1.

Re claim 8, when the blur avoiding photographing mode of the digital camera is selected the gain of the programmable amplifier (105) is increased in incremental step values (col. 9, lines 17-26). The gain is increased in incremental step values in response to the user pressing a triangle-marked button (col. 9, lines 15-16).

Re claim 9, the CPU (121) automatically increases the gain of the programmable amplifier (105) until the amplitude of the signals representing the image is increased to

a predetermined level for an optimum exposure, thus increasing the gain stops when the strength of the signal reaches the predetermined level (col. 10, lines 1-7).

Re claim 10, the predetermined level for optimum exposure can be set according to the quality desired by the user, therefore a Gmax level can be set corresponding to the selected gain (col. 10, lines 41-50).

Re claim 11, when the inverse-triangle button is pressed the gain level may be lowered, therefore the strength may be decreased in incremental step values to a minimum strength value if a lower gain level is selected (col. 9, lines 24-26). As shown in figure 3, the gain drops below 0 when the control voltage drops below 0.25 V.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Hata US 6,603,508 in view of Fellegara et al. US 2001/0015760.

Re claim 12, Hata includes all of the limitations of claim 7 above. However, he does not go into the details of how the live view image in the monitoring mode is displayed. Specifically, Hata fails to specifically state that the displayed image is repeatedly refreshed at a given frame rate independently of LCD brightness and contrast controls.

Fellegara discloses a digital camera with quick review of last captured image (fig. 6). The main display screen unit (36) of the camera is continuously refreshed by frame

rate signals provided by the ASIC (122) and the microcontroller (page 5, paragraph 44). Fellegara makes no mention of LCD brightness or contrast controls being associated with the frame rate, thus this refreshment is independent of the LCD brightness and contrast controls. Therefore, it would have been obvious to include the ASIC (122) and microcontroller as disclosed by Fellegara in the digital camera disclosed by Hata. Doing so would provide a means for activating a display screen for a period of time in order to display an image (Fellegara: page 2, paragraph 8).

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hata US 6,603,508 in view of Nakai et al. US 5,311,245 and further in view of Fellegara et al. US 2001/0015760.

Re claim 13, Hata discloses in figure 1 a digital camera including an image capture device (103) for converting light to an electrical signal (col. 3, lines 40-47). The camera includes an automatic exposure control operation for each mode that the camera operates in (col. 5, lines 65-67; col. 6, lines 1-5). Each mode has an exposure value diagram having a range of exposure times (figs. 4,5,6). The camera disclosed by Hata is capable of operating in a monitoring mode (live view mode) in which an image to be photographed is displayed in a display panel (122) (col. 6, lines 44-47). The camera includes a programmable amplifier (105) for adjusting the strength of the electrical signal in order to output an optimum image signal (col. 6, lines 45-67). The programmable amplifier (105) applies different gains to the image signal depending on

the light conditions of the image to be photographed (col. 6, lines 59-67). Therefore, the programmable amplifier (105) is adjusted when it is determined that the image is obfuscated due to lighting conditions to lack discernible features in order to display an image with optimum brightness (col. 6, lines 62-67). These actions are performed in order to produce a live view image with optimum brightness under low lighting conditions (col. 6, lines 59-67). When an image to be taken is dark (low lighting) and the exposure value is less than 9, the gain of the variable amplifier is varied according to an exposure value (Ev) in order to display an image with optimum brightness and free of blur (col. 6, lines 62-67). Although the monitoring mode described by Hata includes all of the limitations discussed above, the embodiment including the monitoring mode does not specifically state that the programmable amplifier (105) is responsive to a manual indication from a user that the image is sufficiently obfuscated due to lighting conditions to lack discernible features.

Hata discloses in another embodiment of the digital camera a blur avoiding photographing mode. In the blur avoiding photographing mode a user can select an appropriate gain level of the programmable amplifier (105) according to the quality level of the photograph desired by the user (col. 10, lines 41-46). Therefore, it would have been obvious for one skilled in the art to have been motivated to include idea of allowing a user to select the gain of the variable amplifier as disclosed by the blur avoiding photographing mode of the digital camera disclosed by Hata in the monitoring mode of the digital camera disclosed by Hata. Doing so would provide a means for allowing a user of the camera to select the gain of the variable amplifier according to the quality

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level desired by the user rather than automatically adjusting the gain of the variable amplifier (Hata: col. 10, lines 41-46). Hata discloses all of the above limitations, however he fails to distinctly state that an automatic display operation is performed whenever the exposure time of the image capture device is 13.33 milliseconds or greater.

Nakai discloses a digital camera including an exposure arithmetic circuit (40). At step #15 (fig. 6a) the exposure time (T_v) is discriminated as to whether it falls between T_{vmin} and T_{vmax} . If T_v is greater than T_{vmax} a warning is automatically sent out informing the photographer of overexposure (col. 20, lines 42-46). In the "A-priority mode" T_{vmin} and T_{vmax} are controlled according to the preset aperture value (F-number) (col. 18, lines 52-58). In addition, Nakai states that the F-number range may vary from F2 to F22 (col. 17, lines 54-64), therefore the exposure time exceeds 13.33 milliseconds. Therefore, it would have been obvious to include the overexposure warning means as disclosed by Nakai in the digital camera including a variable gain amplifier disclosed by Hata. Doing so would provide a means for automatically displaying a warning whenever the exposure time exceeds 13.33 milliseconds (Nakai: (col. 20, lines 42-46). Although the digital camera including a warning display as disclosed by Hata in view of Nakai includes all of the above limitations, the combination fails to distinctly state that a set of control icons are automatically displayed whenever the exposure time of the image capture device is 13.33 milliseconds or greater.

Fellegara discloses a digital camera with quick review of last captured image (fig. 6). The digital camera includes a graphical user interface that displays camera function icons on a main screen display unit (36) to edit information related to images (page 8, paragraph 62). Therefore, it would have been obvious to include the graphical user interface displaying camera function icons as disclosed by Fellegara in the digital camera including a display based on exposure time disclosed by Hata in view of Nakai. Doing so would provide a means for displaying camera function icons to edit images (Fellegara: page 8, paragraph 62).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is 703-305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at 703-746-3059.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ


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PRIMARY EXAMINER